CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER 90-110
NPDES NO. CA0029769
NPDES PERMIT / WASTE DISCHARGE REQUIREMENTS FOR:

SAN JOSE ARENA
CITY OF SAN JOSE REDEVELOPMENT AGENCY
CITY OF SAN JOSE
SAN JOSE, SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. The City of San Jose, through its City of San Jose Redevelopment Agency, hereinafter called the discharger, by application dated April 16, 1990, has applied for issuance of waste discharge requirements under the National Pollutant Discharge Elimination System (NPDES).

2. The discharger is redeveloping property by constructing a multi-purpose Arena in a former industrial area near downtown San Jose. The Arena building will occupy approximately 3.5 acres, an adjacent surfaced parking area will occupy approximately 9 acres. The site is bounded generally by the Southern Pacific tracks to the west, North Montgomery and Julian Streets to the north, Guadelupe River to the east, and Santa Clara Street to the south.

3. Subsurface investigations by the discharger have revealed significant levels of organic chemical pollution in soils and ground water beneath the site due to the various previous industrial activities over almost 100 years. Some excavation and treatment of the contaminated soils have been performed on the site in the past, but the excavated and treated soild have been replaced; other contaminated soils will be encapsulated on-site; contaminated shallow and possibly deeper groundwater remains under the site.

4. The discharger seeks to treat and discharge the contaminated extracted groundwater that will be discharged from incidental groundwater monitoring program, construction dewatering activities, and future foundation dewatering facilities when necessary. The treatment system will consist of storage with natural aeration where feasible (during construction) and/or a carbon adsorption unit (optional for temporary construction dewatering and mandatory for permanent foundation dewatering) for prior to discharge to meet the requirements of this order. The discharge will be to a storm drain manhole on the W. St. John St. storm drain tributary to the Guadelupe River discharging approximately 700 feet downstream of the confluence of the Guadelupe River and Los Gatos Creek (lat. 37°20'00"N, long. 121°54'00"W) and thence to South San Francisco Bay.

   Discharge of contaminated shallow groundwater removed as a result of construction activities will be limited to a finite amount of water held in temporary storage. Water from construction dewatering will be stored in 20,000 gallon tanks on-site, and will be sampled and analyzed by a state-certified laboratory when the tanks are filled. Tanks containing water that does not exceed discharge standards will be discharged directly to the outfall. Tanks containing water which exceeds the discharge requirements of this Order will be treated on-site before discharge. Discharges will be intermittent, approximately 1/2 day/week due to sampling and analysis lag time. Intermittent discharges will be completed by Winter 1990. Discharges from construction dewatering activities will be intermittent, will not exceed 50 gpm, and will have an average discharge rate of less than 5 gpm (7200 gpd average/ 72,000 gpd maximum).

   The foundation of the facility will be surrounded by a slurry trench cutoff wall to reduce dewatering requirements. Nonetheless, some foundation dewatering beginning December 1, 1990, may be required for for 1/2 day/week for about six months/year, especially during periods of high groundwater levels resulting from large precipitation events. Significant precipitation events will produce flows up to 200 gpm for short periods following the events. Afterwards, discharge rates are expected to return to minimal, intermittent of 0 to 10 gpm (14,400 gpd average/288,000 gpd maximum). All groundwater from foundation dewatering activities will be treated on-site prior to discharge.

The discharger has considered the feasibility of reclamation, reuse, or discharge to a publicly owned treatment works (POTW), as specified in Board Resolution No. 88-160. The discharger will reuse some of this groundwater for dust control and other construction requirements. The discharger may also consider non-potable use in any new buildings that will be constructed or landscape installed. The San Jose/Santa Clara WPCP prohibits discharge of groundwater to its facilities.

5. Groundwater from the site was sampled, and chemicals found of concern were associated with the nearby previous manufactured gas production facility on-site as well as the constituents from former underground fuel and solvent storage, primarily polynuclear aromatic hydrocarbons (PNAs) as high as 6,686 ppb; metals, including copper, zinc, mercury, arsenic, beryllium, and possibly others; cyanides; fuel hydrocarbon residues including gasoline, diesel and their constituents (eg benzene, etc.) as well as oil and grease; non-fuel hydrocarbons, primarily chlorinated organics including 1,2-dichlorethane (DCA) [aka ethylene dichloride (EDC)], bromoform, dibromochloromethane and methylene chloride (the last three possible lab contaminants); semi-volatile compounds associated with PNAs. Other chemicals of concern similar to those found in groundwater were found in the soils but not in the groundwater at this time such as various other PNAs, methyl ethyl ketone, Freon-113, 1,1,1-trichlorethane, dibenzofuran and dibenzothiophene (on the Southern Pacific Property) etc. Implementation of the mitigation and control measures planned should control these soil contaminants from affecting the groundwater on and off site.

6. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986, and has amended it several times thereafter. The Basin Plan contains water quality objectives for the Guadelupe River and South San Francisco Bay.

7. The existing and potential beneficial uses of the Guadelupe River include:

- Contact water recreation
- Warm fresh water habitat
- Wildlife habitat
- Navigation
- Commercial and sport fishing
- Areas of special biological significance
- Fish migration
- Marsh and wetlands

8. The existing and potential beneficial uses of South San Francisco Bay include:

- Contact and non-contact water recreation
- Wildlife habitat
- Preservation of rare and endangered species
- Estuarine habitat
- Fish spawning and migration
- Industrial service supply
- Shellfishing
- Navigation
- Ocean commercial and sport fishing

9. The Basin Plan prohibits discharge of wastewater which has "...particular characteristics of concern to beneficial uses" (a) "at any point in San Francisco Bay south of the Dumbarton Bridge" and (b) "at any point where the wastewater does not receive a minimum initial dilution of at least 10:1 or into any nontidal water, dead-end slough, similar confined water, or any immediate tributary thereof".

10. The Basin Plan allows for exceptions to the prohibitions referred to in Finding 9. above when it can be demonstrated that a net environmental benefit can be derived as a result of the discharge.

11. Exceptions to the prohibitions referred to in Finding 9. are warranted because this discharge is an integral part of a program to cleanup polluted ground water and thereby produce an environmental benefit, and because

receiving water concentrations are expected to be below levels that would affect beneficial uses. Should studies indicate chronic effects, not currently anticipated, the Board will review the requirements of this Order based upon Provision B.1.e.

12. The Basin Plan prohibits discharge of "...all conservative toxic and deleterious substances, above those levels which can be achieved by a program acceptable to the Board, to waters of the Basin". The discharger's ground water extraction and treatment systems and associated operation, maintenance, and monitoring plans constitute an acceptable control program for minimizing the discharge of toxicants to waters of the State.

13. Effluent limitations of this Order are based on the Clean Water Act, Basin Plan, State and U. S. Environmental Protection Agency (EPA) plans and policies, best available technology economically achievable (BAT), and best engineering judgement (BEJ). EPA Region IX draft guidance "NPDES Permit Limitations for Discharge of Contaminated Groundwater: Guidance Document" was also considered in the determination of effluent limits.

14. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

15. The Board has notified the discharger and interested agencies and persons of its intent to issue waste discharge requirements for the discharge and has provided them with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.

16. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. EFFLUENT LIMITATIONS

1. The effluent, at the discharge point to the storm drain, shall not contain constituents in excess of the following limits:

Constituent	Instantaneous Maximum (µg/l)
Volatile Organic Compounds	
1,2-dichloroethane	5
1,1-trichloroethane	5
Freon 113	5
methylene chloride	5
total VOCs (less MEK)	100
methyl ethyl ketone	172
Fuel Related Compounds	
Benzene	5
Toluene	0.5
Ethylbenzene	5
Xylenes	5
Total Petroleum Hydrocarbons	50

1. Effluent Limitations (cont.)

Constituent	Instantaneous Maximum (µg/l)
Metals	
arsenic	20
cadmium	10
chromium (VI)	11
copper	20
lead	5.6
mercury	1
nickel	7.1
silver	2.3
zinc	58
Others	
cyanide	25
total polynuclear aromatic hydrocarbons (PNAs) (as identified by EPA Method 610)	15

	daily maximum	*monthly average*
oil and grease	20000 µg/l	10000 µg/l

2. The pH of the discharge shall not exceed 8.5 nor be less than 6.5.

3. In any representative set of samples, the discharge shall meet the following limit of quality:

   Toxicity: The survival of rainbow trout in 96-hour bioassays of the effluent as discharged shall be a median of 90% survival and a 90 percentile value of not less than 70% survival.

B. RECEIVING WATER LIMITATIONS

1. The discharge of wastes shall not cause the following conditions to exist in waters of the State at any place:

   a. floating, suspended, or deposited macroscopic particulate matter or foam;
   b. bottom deposits or aquatic growths;
   c. alteration of temperature or apparent color beyond present natural background levels;
   d. visible, floating, suspended, or deposited oil or other products of petroleum origin;
   e. toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

   a. pH: The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units.
   b. Dissolved oxygen: 5.0 mg/l minimum. The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause lesser concentration(s) than specified above, the discharge shall not cause further reduction in the concentration of dissolved oxygen.
   c. Un-ionized ammonia (as N): 0.025 mg/l annual mean
      0.4 mg/l maximum

3. This discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

C. PROVISIONS

1. The discharger shall comply with all sections of this order immediately upon adoption by the Board and upon starting any discharge.

2. The discharger shall comply with the self-monitoring program as adopted by the Board and as may be amended by the Executive Officer.

3. The discharger shall notify the Board if any activity has occurred or will occur which would result in the discharge, on a frequent or routine basis, of any toxic pollutant which is not limited by this Order.

4. Any discharge to a location other than the discharge point(s) specified in this Order will require a modification to this Order or submission of a second NPDES application.

5. The discharger shall develop and submit a Best Management Practices (BMP) program acceptable to the Executive Officer by November 1, 1990. The BMP program shall be consistent with the EPA regulation 40 CFR 125, Subpart K and the general guidance contained in the "NPDES Best Management Guidance Document", EPA Report No. 600/9-79-45, December 1979 (revised June 1981). A BMP program acceptable to the Executive Officer shall be implemented by March 1, 1991.

6. The discharger shall submit an operation and maintenance plan for the treatment system by November 1, 1990.

7. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986, except items A.10, B.2, B.3, and C.11.

8. This Order expires August 14, 1995. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code no later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

9. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on August 15, 1990.

STEVEN R. RITCHIE
Executive Officer

Attachments:

Standard Provisions, Reporting Requirements, and Definitions
Self-Monitoring Program (Parts A & B)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

SAN JOSE ARENA
CITY OF SAN JOSE REDEVELOPMENT AGENCY
CITY OF SAN JOSE
SAN JOSE, SANTA CLARA COUNTY

NPDES NO. CA0029769

ORDER NO. 90-110

CONSISTS OF:

PART A dated December 1986, modified January 1987

and

PART B, **ADOPTED AUGUST 15, 1990**

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

Station	Description
I-001	At a point in the combined ground water extraction system immediately prior to any treatment.

B. EFFLUENT

Station	Description
E-001	At a point immediately following treatment, but prior to loss of control of any (combined) effluent.

C. RECEIVING WATERS

Station	Description
C-001	At a point in Guadelupe River at least 100 feet but no more than 200 feet downstream from the storm drain discharge point of E-001 into Guadelupe River.
C-002	At a point in Guadelupe River at least 100 feet but no more than 200 feet upstream from the storm drain discharge point of E-001 into Guadelupe River.

II. SCHEDULE OF SAMPLING AND ANALYSIS

The schedule of sampling and analysis is provided in the attached Table A. All yearly samples shall be performed and reported within one month of startup.

III. MODIFICATIONS TO PART A, DATED DECEMBER 1986 AND MODIFIED JANUARY 1987

All items of Self-Monitoring Program Part A, dated December 1986 and as modified January 1987 shall be complied with except for the following:

A. Additions to Part A: Section G.4.d.5: "Results from each required analysis and observation shall be submitted as laboratory originated data summary sheets in the quarterly self-monitoring reports. All chromatographic peaks for purgeable halocarbons and/or volatile organics shall be identified and quantified for all effluent samples. If previously unquantified peaks are identified in any effluent sample, then these peaks shall be confirmed based on analyses using chemical standards

necessary to achieve proper identification and quantification. Results shall also be submitted for any additional analyses performed by the dischargers at the specific request of the Board's Executive Officer for parameters for which effluent limits have been established and provided to the dischargers by the Board."

B. Deletions from Part A: Sections D.2.g., D.3.b., E.1.e.1, E.1.f., E.3., E.4., E.5., F.2.b., G.2., and G.4.b.

C. Modifications to Part A: For the following, the discharger shall comply with the Sections as changed and reported herein:

1. Section D.2.a. is changed to read:

   "Samples of effluent and receiving waters shall be collected at times coincident with influent sampling unless otherwise stipulated. The Executive Officer may approve an alternative sampling plan if it is demonstrated that expected operating conditions warrant a deviation from the standard sampling plan."

2. Section D.2.d. is changed to read:

   "If two consecutive samples of any one constituent or parameter monitored on a weekly or monthly basis in a 30-day period exceed the effluent limit or are otherwise out of compliance, or if the required sampling frequency is once per month or less (quarterly, annually or other) and the sample or parameter exceeds the limit or is otherwise out of compliance, the discharger shall implement corrective action procedure(s) acceptable to or approved by the Board's Executive Officer, on a case by case basis."

3. Section D.2.e. is changed to read:

   "If any instantaneous maximum limit is exceeded, within 24 hours of receiving the analytical results indicating the violation, a confirmation sample shall be taken and analyzed with 24 hour turn-around time. If the instantaneous maximum is violated in the second sample, the discharge shall monitor daily, and shall not resume discharge until the cause of the violation is found and corrected or the Board's Executive Officer authorizes frequency of the monitoring to be changed."

4. In Section F.1, the phrase "(at the waste treatment plant)" is changed to read, "[at the locations of the various extraction and treatment system(s)]".

5. Any monthly written reports required in Section G.4 shall be filed monthly by the thirtieth day of the following month.

6. Section G.4.e is changed to read:

   "Summary tabulations of the data shall include, for each constituent, total number of analyses, maximum, minimum, and average values for each period. Total flow data shall also be included. This information shall be prepared in a format similar to EPA Form 3320-1. This information shall be submitted only to the Regional Board:

   Executive Officer
   California Regional Water Quality Control Board
   Attention: South Bay Toxics Cleanup Division
   1800 Harrison Street, Suite 700
   Oakland, CA 94612

7. The Annual Report required in Section G.5. shall be submitted by January 30 of each year in place of the monthly report due on the same day.

IV. MISCELLANEOUS REPORTING

If any chemicals or additives are proposed to be used in the operation and/or maintenance of the ground water extraction/treatment system, the discharger shall obtain the Executive Officer's concurrence prior to use. The details concerning such approved use shall be reported in the next periodic report submitted to the Board.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 90-110.

2. Was adopted by the Board on August 15, 1990.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the dischargers, and revisions will be ordered by the Executive Officer or Regional Board.

STEVEN R. RITCHIE
Executive Officer

Attachments: Table A

Part B (cont.)

Table A

SAMPLE STATION	I-1	E-1	C-1	C-2
TYPE OF SAMPLE	Grab	Grab	Grab	Grab
Flow Rate/Volume (MGD)		M		
BOD 5-day, 20°C or COD (mg/l & kg/day)		Y		
Coliform (Total and Fecal as mpn/100ml)		Y		
Oil & Grease (mg/l & kg/day)		M/Q		
Fish Toxicity (undiluted waste) (96-hr % survival)		Y		
Ammonia Nitrogen (Total & Unionized as N) (mg/l)		V	Y	Y
Dissolved Oxygen (mg/l & % Saturation)		Y	Y	Y
Temperature (°C)		M	Y	Y
Arsenic (mg/l & kg/day) Cadmium (mg/l & kg/day) Chromium, Total (mg/l & kg/day) Copper (mg/l & kg/day) Cyanide (mg/l & kg/day) Lead (mg/l & kg/day) Mercury (mg/l & kg/day) Nickel (mg/l & kg/day) Silver (mg/l & kg/day) Zinc (mg/l & kg/day)		M/Q		
EPA Method 601 with Freon 113 or EPA Method 624 O.S.	M/Q	W/M		
EPA Method 610	M/Q	W/M		
EPA Method 624 O.S.	Y	Y	Y	Y
EPA Method 625	Y	Y	Y	Y
Standard Observations		M	M	M

LEGEND FOR TABLE A

TYPES OF SAMPLE

G	Grab
O	Observation

TYPE OF STATIONS

I	treatment facility influent stations
E	waste effluent stations
C	receiving water stations

FREQUENCY OF SAMPLING

E	each occurrence
D	once each day
W	once each week
M	once each month
Q	quarterly, once in March, June, September, and, December
Y	once each year with initial sampling within 30 days of startup

FREQUENCY OF SAMPLING (cont.)

M/Q	monthly for six months after start up of operations and reduced to quarterly there after
W/M	weekly for first month after start up of operations and reduced to monthly thereafter
V	varies; total ammonia nitrogen shall be analyzed and unionized ammonia calculated whenever fish bioassay test results fail to meet the specified percent survival